

AD-A101 735

UNIVERSITY OF NORTHERN COLORADO GREELEY OFFICE OF PU--ETC F/G 5/6
A LITERATURE REVIEW OF CULTURAL RESOURCES IN MORGAN COUNTY, COL--ETC(U)
JUN 78 B J LUTZ

UNCLASSIFIED

NL

1
2

END

DATE

FILED

8 81

DTIC

AD A101735

DISTRIBUTION OF THIS REPORT IS UNLIMITED

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A	

TABLE OF CONTENTS

Abstract	
I. Introduction	1
II. Environment.	1
III. Geology.	2
IV. Fauna.	4
V. Flora.	4
VI. Cultural History	7
Big Game Hunting Tradition	7
Archaic Tradition.	8
Woodland Tradition	10
Post Woodland	11
Historic Aboriginal.	11
VII. Expected Site Densities	12
VIII. History of the Study Area.	13
IX. Map: Approximate Locations of Survey Areas.	15
X. Bibliography	16

ABSTRACT

A literature review of Cultural Resources was done for twelve sections of land in Morgan County, Colorado. Very little prehistoric or historic information could be ascertained from the existing records. Prehistoric sites should be found in the study area, however, if the results of other surveys in the vicinity are valid.

INTRODUCTION

The Office of Public and Contract Archaeology, University of Northern Colorado, was contacted by letter on 9 March 1978 to bid on a scope of work proposal prepared by the U.S. Corps of Engineers (Omaha District). The scope of work called for a literature search for Cultural Resources in Morgan County, Colorado, T.4N, R.56W, Sections 25, 26, 27, 34, 35, and 36, and T.3N, R.56W, Sections 1, 2, 3, 10, 11, and 12. The Office of Public and Contract Archaeology prepared a bid which was accepted on 5 May 1978.

ENVIRONMENT

Climate

The area under consideration lies in northeastern Colorado and is considered to be a portion of the semi-arid Great Plains. Fort Morgan, which lies approximately 10 miles to the west of the study area, is the nearest reporting weather station. The annual precipitation at this station is 12.86 inches (Berry 1968:10). More than 75 percent of this precipitation falls in the 6-month period from April to September. While the spring and summer months might appear to have enough precipitation

to marginally support nonirrigated agriculture, a significant percentage of this precipitation comes in the form of thunderstorms (Spears, et.al. 1968:100). These short, often violent storms do little to promote nonirrigated agriculture, because much of the water is runoff.

The temperature extremes recorded at Fort Morgan are 109 degrees F. and -40 degrees F. (Spears, et.al. 1968:100). However, temperatures near these extremes rarely occur and Berry (1968:10) records January as the coldest month of the year with an average temperature of 24.3 degrees F., and July as the warmest month with an average temperature of 73.9 degrees F. The average annual temperature is 48.9 degrees. Berry states that there is an average of 151 frost free days occurring at Fort Morgan.

Geology

No detailed geologic study records were found for the study area. However, a geotechnical investigation was done for the proposed Wildcat Dam and Reservoir (Pardi 1978). This dam and reservoir will lie approximately 12 miles to the northwest of Brush, Colorado. Since Wildcat Creek is a tributary of the South Platte River, as is Beaver Creek, it is believed that the geology of the two is roughly comparable.

The bedrock formations of Wildcat Creek are of

sedimentary origin (Pardi 1973:2). Pardi (1978:3-5) divides the soils into six categories:

1. Undivided eolian, colluvium and residual soils. These soils represent the majority of overburden soils in the Wildcat Creek drainage.

2. Pediment gravels. These gravels are on pediment remnants which were created when stream elevations were higher than they are at present.

3. Upper level terraces and associated deposits. These terraces lie from about 15 to 50 feet above the present stream channel and were created by former stream action.

4. Intermediate terraces and associated deposits. These terraces lie from about 5 to 20 feet above the present stream channel and were formed after the upper level terraces. Both the upper and intermediate level terraces contain gravels and clay alluvial soils as well as eolian soils.

5. Tributary valley and alluvial fan deposits. These deposits are slightly silty to clean sand and are found on the floors of the tributary valleys.

6. Present-day channel and floodplain deposits. These soils are found up to 5 feet above the present stream channel. They are composed of sand (which varies from clean to silty) and occasional lenses of clay.

Fauna

Several large ungulates are known to have been present in the High Plains (Armstrong 1972). These animals would have provided protein for aboriginal groups. A list of the fauna would include:

Genus and Species	Common Name
<u>Cervus canadensis</u>	American Elk
<u>Odocoileus hemionus</u>	Mule Deer
<u>Odocoileus virginianus</u>	White-tailed Deer
<u>Antilocapra americana</u>	Pronghorn
<u>Bison bison</u>	Bison

Elk and deer inhabited river and creek bottoms, while the pronghorn and bison inhabited the areas away from water sources.

In addition to these large ungulates, both Sylvilagus sp. (cottontail) and Lepus sp. (jackrabbit) are common to the area today and could have provided additional protein for prehistoric human groups.

Flora

The following list of plants which were potentially useful to prehistoric people of the area has been extracted from Johnson (1978), Harrington (1967), Fetterman (n.d.), Kvame (1975), and from the RAPIC (Rapid Access Plant Information Center) at Colorado State University.

Genus and Species	Common Name
<u>Amaranthus sp.</u>	Pigweed
<u>Asclepias speciosa</u>	Showy Milkweed
<u>Agropyron smithii</u>	Western Wheatgrass
<u>Astragalus crassicaulis</u>	Groundplum Milkvetch

Genus and Species

Common Name

Bouteloua gracilis
Cleome serrulata
Cyperus sp.
Cirsium undulatum
Cirsium canescens
Deshampsia sp.
Descurainia pinnata
Descurainia californica
Echinochloa crusgalli
Helianthus annuus
Helianthus petiolaris
Hedysarum sp.
Ipomoea leptophylla
Lactuca scariola
Oenothera nuttallii
Oenothera pallida
Oenothera albicaulis
Oenothera strigosa
Opuntia sp.
Oryzopsis hymenoides
Physalis virginiana
Physalis heterophylla
Physalis lobata
Psoralea tenuifolia
Peraphyllum ramosissimum
Plantago major
Psoralea hypogaea
Potamogeton foliosus
Proboscidea species
Psoralea esculenta
Prunus americana
Polygonum sp.
Ranunculus sceleratus
Rorippa sp.
Rumex venosus
Rumex salicifolius
Rosa woodsii
Ribes cereum
Rhus trilobata
Rosa nutkana
Ribes aureum
Ratibida columnifera
Rosa acicularis
Scirpus paludosus
Sagittaria latifolia
Solanum americanum
Sollacina stellata
Shepherdia argentea
Scirpus acutus
T. cleopatra argentopotamicum
Typha angustifolia
Typha latifolia

Blue Gamma
 Bee Spiderflower
 Nutgrass
 Wavyleaf Thistle
 Western Flodman Thistle
 Hairgrass
 Pinnate Tansy Mustard
 California Tansy Mustard
 Barnyard Grass
 Sunflower

 Sweetvetch
 Bush Morning Glory
 Wild Lettuce

 Rocky Mountain Cowliely
 Evening Primrose
 Prickly Pear
 Indian Ricegrass
 Longleaf Groundcherry
 Ground Cherry
 Plains Chinese Lantern

 Squaw Apple
 Plantain
 Little Breadroot
 Pondweed
 Devils Claws
 Common Breadroot
 Wild Plum
 Knotweed
 Blister Buttercup
 Watercress

 Woodrose
 Wax Current
 Skunkbush Sumac
 Nootka Rose
 Gooseberry
 Coneflower
 Rose
 Bulrush
 Common Arrowhead
 Black Nightshade
 False Solomon's Seal
 Silver Buffaloberry
 Bulrush
 Navajo Tea
 Narrowleaf Cattail
 Common Cattail

Genus and Species

Urtica dioica
Viola nephrophylla
Vitis rotundifolia
Viola nuttallii
Yucca glauca

Common Name

Tall Nettle
Violet
Wild Grape
Nuttall Violet
Yucca (Soapweed)

CULTURE HISTORY

An archaeological site file search was conducted in the Office of the State Archaeologist (Colorado) for known sites in the study area. While no sites have been reported, this is indicative only of the lack of both systematic surveys and excavations in the study area. In spite of this, the general culture history of the area is known.

Big Game Hunting Tradition

The Big Game Hunting Tradition (Willey 1966:37) existed in eastern Colorado from about 12,000 B.C. to about 6,000 B.C. The first known stage of this tradition has been termed Clovis. These people were migratory hunters who hunted mammoth, a now extinct species, as well as other forms of extinct and nonextinct animals. Hunting of the larger animals was done with spears and there are some indications that the animals were killed in areas where they could not easily escape. It is unknown, however, if the animals were purposely driven into these areas. The Dent site (Wormington 1957:43-4), near Milliken, Colorado is an illustration of this type of site. In the immediate vicinity of the study area, a Clovis projectile point was found in a survey of the Narrows Dam (Morris, et.al. 1975:237). Unfortunately, it was found on a gravel bar, and, thus, was out of context.

The Clovis period was succeeded by a period (approximately 9,000 - 8,000 B.C.) in which the hunters concentrated upon now extinct forms of bison. As before, hunting was done with spears; the spears, however, were tipped with what is known as Folsom points. These projectiles show continuity with the earlier Clovis points; both were fluted (i.e., large channel flakes were removed from both surfaces). The Lindenmeir site (Wormington 1957:31-9), north of Fort Collins, is an example of a camp site of this period. As before, there is some indication that the bison were driven into areas where escape was difficult.

The third and last stage of the Big Game Hunting Tradition has been termed Plano. During this period, there was a wide variety of lanceolate, but unfluted, projectile points. Among the animals hunted were modern forms of bison. Sites with projectile points of this type were found in a survey of the Narrows Dam area (Morris, et.al. 1975). Also, Stanford (1975:34) has excavated a Plano site in Yuma County. This was a butchering site.

Archaic Tradition

The Archaic Tradition succeeded the Big Game Hunting Tradition. On the Central Plains it is thought to have occurred within the interval 4000 B.C. to approximately 0 A.D. It is also known as the Middle Prehistoric Period. Sites of this tradition generally show a wider use of environmental resources than do the earlier sites; for

example, many of the sites have grinding stones. It is believed that these stones indicate the grinding of wild vegetal foods. Another characteristic of this tradition is the wide range of animals that were hunted.

The early Archaic (ca. 4000 - 3000 B.C.) coincided with a climatic episode known as the Altithermal. This period of time was characterized by both higher temperatures and less precipitation than is presently the case (Willey 1966:313). Though the effects of the Altithermal upon human populations are not completely known, the archaeological record does show a few sites in the Central Plains during this period (Wood 1967:572).

During the latter stages of the Archaic period, numerous sites have been found from Wyoming, Nebraska, and Colorado. The Uhl site is adjacent to the study area in Weld County (Wood 1967:54-189). The earliest component from this site is called Zone E and is radiocarbon dated to the first 2 centuries B.C. Besides projectile points characteristic of other excavated Archaic sites, there are grinding stones and a wide variety of small game which had been hunted. The Narrows Dam survey (Morris, et.al. 1975:287) also produced Archaic sites which have, at this time, not been excavated. The Wildcat Reservoir (Morgan County, Colorado) survey (Lutz, et.al. 1978) produced an isolated find (IF 21) which is probably an Archaic projectile point or knife.

Woodland Tradition

The Woodland Tradition is believed to have occurred between 0 A.D. and 1000 A.D. on the Great Plains. The hallmark of Woodland sites is pottery. Beyond the similarity in pottery styles, little is known of the relationships between Woodland sites in eastern Colorado and Woodland sites in Nebraska, Kansas, and east of the Missouri River. For this reason, Wood (1967:594) prefers to call this the Early Ceramic Period in Colorado. Evidence is lacking of both agriculture and surface dwellings constructed with wooden posts on the plains of eastern Colorado. Agriculture, however, is present in LoDaisKa (Irwin and Irwin 1959: 106-13), a Woodland site in the foothills between Denver and Boulder.

Wood (1967) excavated a number of sites with Woodland components in Weld and Logan Counties, Colorado. He reports (1967:609) that the pottery from these sites is most similar to the Parker phase sites, one of which is LoDaisKa. Wood says that no structures or evidence of agriculture is present in any of the sites that he excavated. The Narrows Dam survey (Morris, et.al. 1975) found many Woodland sites in the survey area. Again, no structures or evidence of agriculture was reported. This, however, may be a reflection of what can be ascertained by surface survey techniques rather than what is actually represented in the sites. In the Wildcat Reservoir survey area, four Woodland sites and two sites of possible Woodland affiliation

were found (Lutz, et.al. 1978). Because of the small amount of material collected, it is not possible to designate their phase affiliation.

Post Woodland

Very little is known about post-Woodland occupation in eastern Colorado. This period covers the time span between 1000 A.D. and the beginning of European occupation of the area. Wood (1967:618-48) divides this period into the Middle and Late Ceramic Periods. In western Nebraska and western Kansas the earlier part of the period is represented by the Upper Republican Culture (Wedel 1961:94). Populations were more sedentary than previously. Subsistence was based upon small scale agriculture as well as hunting and gathering. Wood (1967:627-35) relates nine sites that he excavated in Weld and Logan Counties to this period. Unfortunately, in most cases there were few diagnostic artifacts and most of the sites were put within the category of Middle Ceramic (and/or Upper Republican) on the basis of their radiocarbon dates. In eastern Colorado nothing is known of the latter part of the Post-Woodland period.

Historic-Aboriginal

Considering the fact that there are so many discrepancies in the Historic-European record, such as the location of stage stations (Morris, et.al. 1975:265), it should not be surprising that our knowledge of Historic-Aboriginal

populations and sites is nonexistent in northeast Colorado. The Wildcat Reservoir survey located two possible sites of this period (Lutz, et.al. 1978).

EXPECTED SITE DENSITIES

Only two major archaeological site surveys have been conducted in Morgan County, Colorado. The Narrows Dam survey was conducted in 1974; about 280 sites in the 106,000 acres that were surveyed (Morris, et.al. 1975) were found. The Wildcat Creek survey located 40 sites in the 3,000 acres that were surveyed (Lutz, et.al. 1978). Site density variation on the Wildcat Creek survey ranged from 10 sites in T. 5N, R. 57W, Section 29, where approximately 90 percent of the land was surveyed, to two sites in T. 5N, R. 57W, Section 19, where approximately 50 percent of the land was surveyed. In gross numerical terms, there was one site found for every 75 acres on the Wildcat Creek survey.

Many of the major habitation sites that were found in both surveys are along major drainages. Specifically, they tend to be on the first or second terraces which border a drainage. Sites farther away from the drainages tend to be special purpose sites, such as lookouts and/or chipping stations.

We would expect that the area around Beaver Creek would have as dense a site frequency as does Wildcat Creek and would caution the Corps of Engineers to have systematic surveys done before land alteration occurs.

HISTORY OF THE STUDY AREA

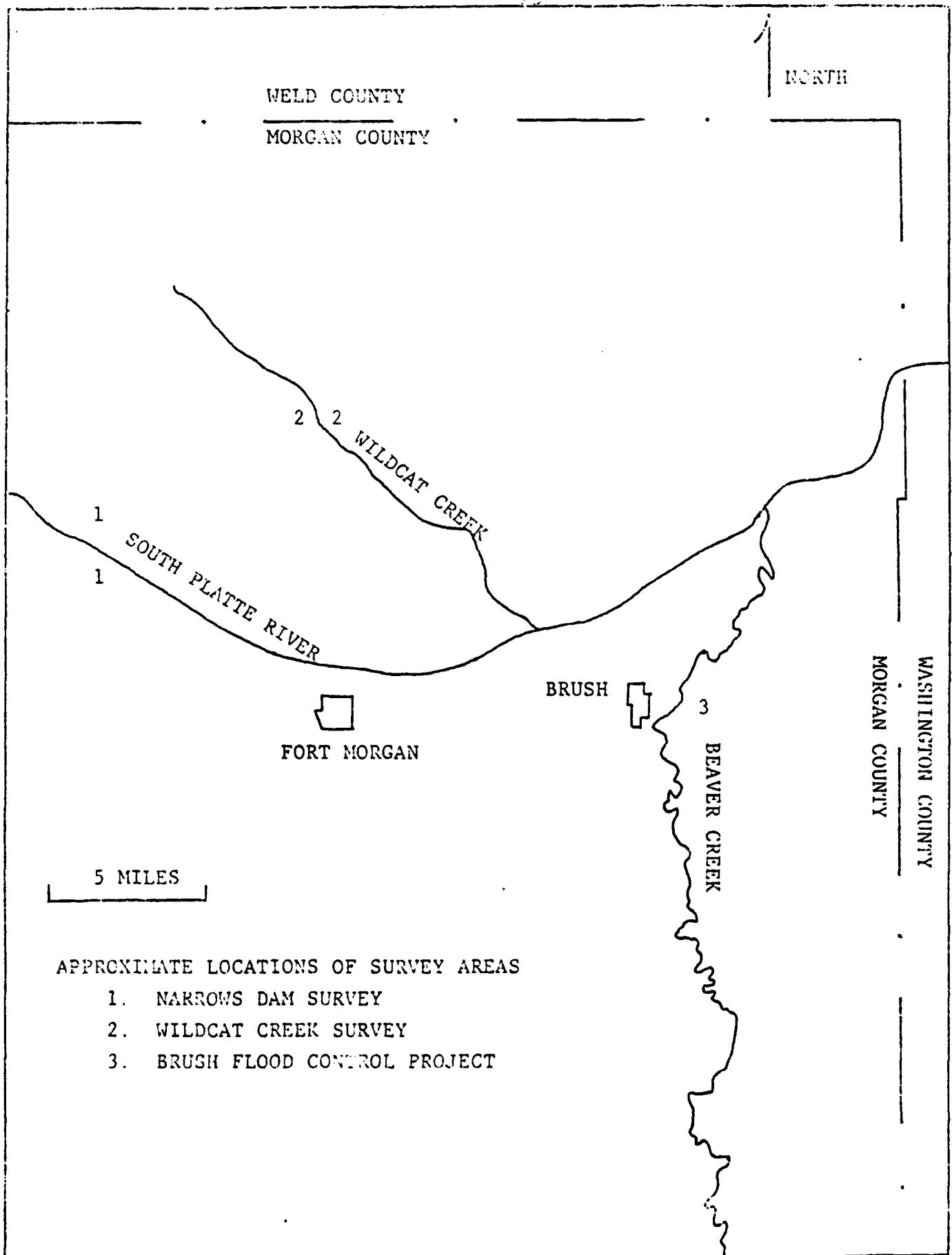
This brief history of the Brush area was done by consulting a special edition of the Fort Morgan Times, dated 1 August 1959, and by a review of the Plat Records in the Morgan County Assessors Office. Unfortunately, the Plat Records only go back as far as 1935 and the author was informed that the older records were either lost or destroyed. Even more unfortunate, the Property Cards, which show structures and their locations, only go back as far as 1976. The older Property Cards were apparently destroyed at that time.

Brush was first called Beaver Valley. Before it became a town, it was a shipping station of the Texas-Montana cattle trail. The Lincoln Land Company filed a plat of the town on 22 June 1882 with the county clerk of Weld County (at that time Weld County included what is now Morgan County). It is interesting to note that the Lincoln Land Company still owned land in T. 3N, R. 56W, Section 2 as late as 1956.

The Burlington Road (a railroad company) was completed in the summer of 1882; it went from McCook, Nebraska, to Denver, Colorado. The first post office was located in a section house of the Burlington Road in 1883.

The first residence was constructed in Brush in the fall of 1882 by John T. Wylie. During that same fall, three other houses were built, and at that time the population of Brush was 25. Brush was finally incorporated in 1884.

Historic structures may still exist in the study area. If they do, effort should be made by the Corps of Engineers to ascertain their significance.



B I B L I O G R A P H Y

- Anonymous
1959 The Fort Morgan Times.
- Armstrong, David M.
1972 Distribution of mammals in Colorado. Museum of Natural History, University of Kansas: Monograph No. 3.
- Berry, Joseph W.
1968 Climate of Colorado. Climatography of the United States, No. 60-5. U.S. Dept. of Commerce, Environmental Science Services Administration, Environmental Data Service, Washington, D.C.
- Fetterman, Jerome
n.d. The ethnobiological resources of the Park Plateau, Las Animas County, Colorado. To be included in the Office of Public and Contract Archaeology, University of Northern Colorado, Cultural Resources Management Report on the Raton Coal Lease Basin Survey for the Bureau of Land Management.
- Harrington, H.D.
1967 Edible Native Plants of the Rocky Mountains. Albuquerque, The University of New Mexico Press.
- Irwin, H.J. and C.C. Irwin
1959 Excavations at the LoDaisKa Site. Denver Museum of Natural History, Proceedings No. 8.
- Johnson, Emery
1978 Soils Data for Site of Proposed Wildcat Reservoir. U.S. Department of Agriculture, Soil Conservation Service.
- Kvame, Kenneth L.
1975 Edible plants available to aboriginal occupants of the Narrows area. IN Morris, Elizabeth Ann, Bruce J. Lutz, N. Ted Ohr, Timothy J. Kloberdantz, Kenneth L. Kvame, Clark Pool (contributor). Archaeological Survey of the Narrows Unit Project. Morgan and Weld Counties, Northeastern Colorado. Fort Collins, Laboratory of Public Archaeology, Colorado State University.

Lenihan, Daniel J., Toni L. Carrell, Thomas S. Hopkins,
A. Wayne Prokopetz, Sandra L. Kayl, Cathryn S. Tarasovic

- 1977 The Preliminary Report of the National Reser-
voir Inundation Study. Santa Fe: Southwest
Cultural Resources Center, National Park
Service, U.S. Department of the Interior.

Lutz, Bruce J., T. Reid Farmer, and Cheryl Muceus

- 1978 A Cultural Resource Inventory of the Wildcat
Reservoir, Morgan County. Prepared for the
Riverside Irrigation District and Public Service
Company of Colorado.

Morris, Elizabeth Ann, Bruce J. Lutz, N. Ted Ohr,

Timothy J. Kloberdantz, Kenneth L. Kvame, Clark Pool.

- 1975 Archaeological Survey of the Narrows Unit
Project. Morgan and Weld Counties, Northeastern
Colorado. Fort Collins, Laboratory of Public
Archaeology, Colorado State University.

Pardi, Marcus J.

- 1978 Preliminary geotechnical investigation for
the Proposed Wildcat Dam and Reservoir. Pre-
pared by Chen and Associates, Inc.: Denver,
Colorado.

Spears, Clayton F., Alan E. Amen, Louis A. Fletcher,
and Lynn R. Healey

- 1968 Soil Survey of Morgan County, Colorado. United
States Department of Agriculture, Soil
Conservation Service.

Stanford, Dennis

- 1975 The 1975 excavation at the Jones-Miller Site,
Yuma County, Colorado. Southwestern Lore 41:
34-38.

Wedel, Waldo R.

- 1961 Prehistoric Man on the Great Plains. Norman,
University of Oklahoma Press.

Willey, Gordon R.

- 1966 An Introduction to American Archaeology: Vol.
I, North and Middle America. Englewood Cliffs,
N.J. : Prentice-Hall, Inc.

Wood, John Jackson

- 1967 Archaeological Investigations in Northeastern
Colorado. Unpublished Ph.D. dissertation,
University of Colorado.

Wormington, H.M.

- 1957 Ancient Man in North America. Denver Museum
of Natural History, Popular Series No. 4.